

REMARKS

In view of the following remarks, Applicants respectfully submit that all claims of the instant application are in condition for allowance, an indication of which is respectfully requested.

Claim Rejections - 35 U.S.C. §§ 102 & 103

Claims 2-7, 11-14, and 17 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Publication Number 2003/0138679 ("Prased"). Alternatively, claims 2-7, 11-14, and 17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Prased. Applicants traverse these rejections for at least the following reasons.

Applicants respectfully submit that Prased, at a minimum, fails to describe or suggest a fuel tank that includes, among other features, a flow path opening and closing member configured to be provided in said fuel injecting portion, allow said liquid fuel to pass to said fuel supply portion from said fuel injecting portion after said fuel supply portion and said fuel injecting portion are joined, and shut off the passage of said liquid fuel to said fuel supply portion from said fuel injecting portion before said fuel supply portion and said fuel injecting portion are disconnected, wherein said flow path opening and closing member is constituted by a fuel valve and a closing valve provided in a flow path of said liquid fuel, as recited in claim 2.

To provide context, in one aspect, a fuel tank for a fuel cell of the instant application includes a flow path opening and closing member which opens and closes the liquid fuel flow depending on the attaching and detaching between the fuel tank and fuel cell. The flow path opening and closing member is constituted by two valves. The two valves include a fuel valve and a closing valve. Each of the fuel valve and the closing valve can be configured to open and

close the liquid fuel flow path depending on the attaching and detaching between the fuel tank and fuel cell (e.g., attaching and detaching between the fuel injection portion included in the fuel tank and the fuel supply portion included in the fuel cell main body).

This constitution of a fuel tank with a flow path opening and closing member including two valves can reduce or eliminate a possibility of leakage between the fuel tank and the fuel cell, which is present when the flow path opening and closing member includes only one valve. *See*, Specification at page 22, lines 7-18 (stating “[o]n the other hand, since it is possible to control the passage of the methanol water solution 109 only by the closing valve 139, the structure may be made, as shown in Fig. 38, such that the fuel injecting portion 130 is provided with only the closing valve 139 without the fuel valve 131. However, in this structure, since there can be considered a possibility that the methanol water solution 190 leaks accidentally in view of the structure of the closing valve 139, it is preferable that the fuel valve 131 is further provided as in the structure mentioned above, for further improving a safety in the fuel supply”). The cited references fail to teach or suggest the above problem and solution.

Prased, in FIG. 1, illustrates a fuel cartridge 100 that includes a fuel reservoir 102, a reaction chamber 104, and a bi-product reservoir 106. Prased at page 2, paragraph [0023]. The fuel reservoir 102 stores a fuel containing FCS. *Id.* The fuel containing FCS is supplied to the reaction chamber 104 via an inlet line 108, while the bi-product BP is transferred to the bi-product reservoir 106 via an outlet 110. *Id.* The fuel “F” that is released from the fuel containing substance FCS will exit the fuel cartridge 100 by way of an outlet connector 114. Prased at page 2, paragraph [0024]. The connector 114 acts as a cap to prevent the release of fuel unless it mates with a corresponding host device. *Id.* To this end, in FIG. 4, Prased shows a host device connector 116 connected to the connector 114.

The Office Action asserts that the connector 114 and the host device connector 116 correspond to the opening and the closing member recited in claim 2. *See*, Office Action at page 7. Applicants disagree. As shown in FIGS. 7 and 8 of Prased, the connector 114 is configured to open and close a liquid flow path depending on the attaching and detaching to the host device connector 116 (shut off valve 126). The attaching and detaching is performed between the connector 114 and the host device connector 116 (shut off valve 126) and is not performed between the fuel tank (e.g., fuel reservoir 102 in Prased) and fuel cell (e.g., reaction chamber 104 in Prased). Furthermore, the connector 116 is part of the host device and not part of the fuel reservoir 102 included in the fuel cartridge 100. *See*, Prased at page 3, paragraph [0029] (stating “a pump 118. . .that is associated with the host device. . .[a] shut-off valve 126 will be employed here in place of the pump 118”). As such, the host device connector 116 does not count toward the number of valves included in the fuel tank.

The Office Action asserts that the fuel injection portion recited in claim 2 corresponds to the spring 120 and pusher 122 shown in FIG. 4 of Prased. Assuming, *arguendo*, this assertion is correct, the alleged fuel injection portion still does not include a flow path opening and closing member constituted by a fuel valve and a closing valve connecting the fuel reservoir 102 to the reaction chamber 104.

As such, Prased fails to describe or suggest a fuel tank that includes, among other features, a flow path opening and closing member configured to be provided in said fuel injecting portion, allow said liquid fuel to pass to said fuel supply portion from said fuel injecting portion after said fuel supply portion and said fuel injecting portion are joined, and shut off the passage of said liquid fuel to said fuel supply portion from said fuel injecting portion before said fuel supply portion and said fuel injecting portion are disconnected, wherein said flow path

opening and closing member is constituted by a fuel valve and a closing valve provided in a flow path of said liquid fuel, as recited in claim 2.

Furthermore, Prased also fails to describe the problem addressed in the instant application that having a single valve results in the possibility of leakage between the fuel tank and the fuel cell. For at least the foregoing reasons, Applicants respectfully request reconsideration and withdrawal of the rejections of claim 2, along with its dependent claims.

Claim 11 recites a fuel cell system that includes, among other features, a fuel tank comprising a flow path opening and closing member configured to be provided in said fuel injecting portion, allow said liquid fuel to pass to said fuel supply portion from said fuel injecting portion after said fuel supply portion and said fuel injecting portion are joined, and shut off the passage of said liquid fuel to said fuel supply portion from said fuel injecting portion before said fuel supply portion and said fuel injecting portion are disconnected, wherein said flow path opening and closing member included in said fuel tank is constituted by a fuel valve provided in a flow path of said liquid fuel and an injecting portion side closing valve. Therefore, for at least the reasons presented above with respect to claim 2, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 11, along with its dependent claims.

Claims 8 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Prased in view of U.S. Patent Publication Number 2003/0082421 ("Yonetsu"). Claims 9 and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Prased in view of JP 2004-192171 ("Kazunori"). Claims 8, 9, 15, and 16 variously depend from claims 2 and 11. Therefore, claims 8, 9, 15 and 16 are believed to be allowable for at least the reasons presented above with respect to claims 2 and 11. As such, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 8, 9, 15, and 16.

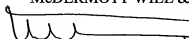
Conclusion

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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